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MCM4 (pS54) Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51644

Product Information

Application	WB
Primary Accession	P33991
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	96558

Additional Information

Gene ID	4173
Other Names	DNA replication licensing factor MCM4, CDC21 homolog, P1-CDC21, MCM4, CDC21
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human MCM4. The exact sequence is proprietary.
Dilution	WB~~1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	MCM4 (HGNC:6947)
Synonyms	CDC21
Function	Acts as a component of the MCM2-7 complex (MCM complex) which is the replicative helicase essential for 'once per cell cycle' DNA replication initiation and elongation in eukaryotic cells. Core component of CDC45-MCM-GINS (CMG) helicase, the molecular machine that unwinds template DNA during replication, and around which the replisome is built (PubMed:16899510, PubMed:25661590, PubMed:32453425, PubMed:34694004, PubMed:34700328, PubMed:35585232, PubMed:9305914). The active ATPase sites in the MCM2-7 ring are formed through the interaction surfaces of two neighboring subunits such that a critical structure of a conserved arginine finger motif is provided in trans relative to the ATP-binding site of the Walker A box of the adjacent subunit. The six ATPase active sites, however, are likely to contribute differentially to the complex helicase activity (PubMed:16899510, PubMed:25661590, PubMed:32453425,

PubMed:9305914).

Cellular Location	Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses.

Background

Acts as component of the MCM2-7 complex (MCM complex) which is the putative replicative helicase essential for 'once per cell cycle' DNA replication initiation and elongation in eukaryotic cells. The active ATPase sites in the MCM2-7 ring are formed through the interaction surfaces of two neighboring subunits such that a critical structure of a conserved arginine finger motif is provided in trans relative to the ATP-binding site of the Walker A box of the adjacent subunit. The six ATPase active sites, however, are likely to contribute differentially to the complex helicase activity.

References

Musahl C.,et al.Eur. J. Biochem. 230:1096-1101(1995).
Connelly M.A.,et al.Genomics 47:71-83(1998).
Ladenburger E.M.,et al.Cytogenet. Cell Genet. 77:268-270(1997).
Hu B.,et al.Nucleic Acids Res. 21:5289-5293(1993).
Ishimi Y.,et al.J. Biol. Chem. 272:24508-24513(1997).